REPORT UPON
GROUND WATER CONDITIONS
WITHIN
SANTA CLARA VALLEY WATER CONSERVATION DISTRICT

March 8, 1966

J. Robert Roll
Chief Engineer

GB
1025
S383.R4
v.1966
REF

EDMUND A. MIRASSOU
President

FRANK A. WILCOX
Vice-President

GLENN F. DODSON
Executive Administrator

VIOLET V. ENANDER
District Secretary

ALBERT T. HENLEY
Attorney

J. ROBERT ROLL
Chief Engineer

SANTA CLARA VALLEY WATER CONSERVATION DISTRICT

• • •

15420 ALMADEN ROAD • SAN JOSE, CALIFORNIA 95118 • PHONE 269-3650

FILE NO.__________

March 8, 1966

Honorable Board of Directors
Santa Clara Valley Water Conservation District
15420 Almaden Road
San Jose, California 95118

Gentlemen:

In accordance with Section 75570 of the Water Code, there is presented herewith an engineering report entitled, "Report Upon Ground Water Conditions Within The Santa Clara Valley Water Conservation District."

Respectfully submitted,

J Robert Roll

J. Robert Roll
Chief Engineer

lt

DIRECTORS
ROY M. BUTCHER DIV. 1 • ROBERT T. SAPP DIV. 2
J. J. LENIHAN DIV. 3 • F. A. WILCOX DIV. 4
D. J. RIBISI DIV. 5 • E. A. MIRASSOU DIV. 6
JOSEPH CHIRI DIV. 7

INTRODUCTION

Section 75560 et seq. of the Water Code requires that an engineering report shall be prepared annually on the ground water conditions of the District. This report must provide the Board of Directors of the District with the information needed by it in making the determinations required by Section 75574 of said Code.

In accordance with Resolution No. 791 of the Board of Directors of this District which indicated the Board's intention to divide the District into two zones, this report provides the required engineering data for the two areas outlined in said Resolution.

RAINFALL AND RUNOFF

The 1964-65 season had slightly above normal rainfall. The total at the San Jose municipal weather station was 15.03 inches which is about one inch above the long term average. The seasonal rainfall at the District's rain gage stations varied between 103% and 134% of normal.

The total runoff into the valley streams was 190,019 acre feet of which 34,910 acre feet wasted into San Francisco Bay.

RESERVOIR STORAGE AND RELEASES

Five of the eight District reservoirs were filled during the season. The maximum storage was 82,859 acre feet out of a total capacity of 156,900 acre feet. Table I shows the storage in each reservoir at the beginning and end of the season and the maximum storage during the season.

EVAPORATION

During the 1964-65 season the total loss of water through evaporation from District reservoirs was 4,590 acre feet. The total evaporation from stream channels and percolation ponds amounted to 1,150 acre feet.

TABLE I

RESERVOIR STORAGE
(acre feet)

Reservoir	Capacity	Oct. 1, 1964	Max. Storage	Oct. 1, 1965
Almaden	1,960	0	Full	386
Anderson	91,300	841	18,626	11,206
Calero	9,630	157	Full	4,288
Coyote	24,510	0	Full	1,555
Guadalupe	3,460	0	Full	255
Lexington	21,430	0	20,328	2,632
Stevens Creek	3,860	97	Full	346
Vasona	750	0	485	386
Total	156,900	1,095	82,859	21,054

CLOUD SEEDING

During the 1964-65 season the successful cloud seeding program that has been conducted during 12 of the past 14 years was continued by the District. This program has increased the rainfall over the target area (watershed area of Santa Clara Valley) by 13.4% which amounts to a total increase of 20.5 inches over the twelve years of operation. This increase amounts to about 776,000 acre feet of water. Even if it is assumed that only 10% of this amount appears in the streams as runoff the total available supply for percolation has been increased by about 75,000 acre feet during this twelve-year period.

IMPORTED WATER

The State's South Bay Aqueduct began delivery of water to Santa Clara County on June 10, 1965. During the balance of the 1964-65 season this facility delivered 10,270 acre feet to this area. (By the end of the Calendar year this had increased to 15,170 acre feet.)

In order to increase the total available supply of water to the District, two supplementary programs have been in operation during portions of the past year. These are the cloud seeding program conducted by this District and the water importation program conducted by the Santa Clara County Flood Control and Water District.

PERCOLATION AND/OR DIRECT USE

The total inflow to the valley during the 1964-65 season consisted of 90,100 acre feet of natural flow, 71,860 acre feet of stored water and 10,270 acre feet of imported water. The total losses were 34,910 acre feet to San Francisco Bay and 1,150 acre feet by evaporation. The difference of 136,170 acre feet represents water percolated and/or used directly for irrigation.

This total percolation and direct use can be broken down into three categories. The first is natural percolation occurring in stream channels without any assistance from District facilities. This amounted to 55,210 acre feet for the season. The second category is imported water which was percolated by or in District facilities. This amounted to 10,180 acre feet. The third category is natural flow percolated by or in District facilities together with stored water which is percolated or utilized for direct irrigation. This amounted to 70,780 acre feet.

COST OF CONSERVING WATER

At the close of the season the Board of Directors requested that a study be made of the cost of conserving water by the District. Such a study was made and presented to the Board on January 11, 1966.

This report summed up the total cost of District operations over the repayment period of the seven bond issues that were authorized to pay for the capital improvements required to conserve local and imported water. This sum when divided by the total number of acre feet of water to be conserved during this period gives an acreage cost per acre foot for conserving water. This amounted to $12.51 per acre foot.

GROUND WATER FLUCTUATIONS

On Plate I is shown the fluctuation of the average depth to water of the end of the irrigation season each year since 1909. The end of the irrigation season corresponds with the low point of the season and is the most critical period in the annual ground water cycle. It will be noted that there was a rise in the water table during the 1964-65 season. At the low point of 1964 the average depth to water throughout the valley was 147.2 feet. At the low point of 1965 it was 137.5 feet. The rise, therefore, was 9.7 feet.

It must be borne in mind, however, that this rise was not uniform over the entire District. Plate II shows the fluctuations of the water table in various sub-areas of the valley. It will be noted that the water table was higher at the low point of 1965 than at the low point of 1964 in all sub-areas except the former artesian area. This area is that portion of the valley lying northerly of the El Camino Real and Brokaw Road and westerly of the Oakland Highway. In this area the average water level is about 100 feet below sea level!

Plates III and IV are contour maps showing the lines of equal elevation of water in wells for the Spring of 1942 and the Spring of 1965 respectively.

On Plate III it will be noted that there was a fairly uniform slope to the water table from about 200 feet above sea level at the edges of the valley to about 40 feet above sea level near the bay. This condition corresponds to the high point shown on Plate II. This is also the condition that must be restored to half subsidence and the threat of salt water intrusion.

Contrasting to this, is the condition shown on Plate IV which depicts the water table in the Spring of 1965. The elevation of the water table along the southerly edge of the valley is still about 200 feet above sea level but it drops very rapidly to about 100 feet below sea level along a line running from Cupertino to Campbell to San Jose. In the Cupertino-Sunnyvale area the water table has dropped to as much as 140 feet below sea level!

It will be noted that there are many cones of depression in the water table. Each of these coincides with the location of major municipal well fields.

It is extremely important that this undesirable condition be alleviated as rapidly as possible. This extreme lowering of the water table is the cause of the objectionable subsidence that is plaguing large areas of the valley. It also poses the constant threat of sea water intrusion.

OVERDRAFT

The accumulated overdraft of about one-half million acre feet was partially reduced during this past year. The rise in average water level of

9.7 feet represents a replacement of about 58,200 acre feet more water than was withdrawn. This was possible because of the above normal rainfall and the availability of imported water.

WATER QUALITY

The District, with the cooperation of the State of California Department of Water Resources, has continued its program of water quality monitoring.

Certain areas have been found in which wells yield waters of inferior quality. These areas are: part of the Evergreen area in which connate water of high chloride content is obtained from depths below 300 feet; part of the Penitencia alluvial fan in which wells yield water high in chlorides and boron; and the area around San Francisco Bay in which shallow aquifers are contaminated by salt water.

There appears to be a direct relationship between the chloride content of the water in some wells and tidal flow up an adjacent stream. A significant decrease in chloride content of water obtained from a well near Stevens Creek was detected when tidal flow up that stream was temporarily stopped during the Summer of 1965 by a construction project.

Solutions to all of these quality problems are being sought.

PERCOLATION POND DEVELOPMENT

During the 1964-65 water year work continued on development of new percolation areas authorized in the 1957 bond issue.

LOS CAPITANCILLOS PERCOLATION SYSTEM

The diversion works and desilting facilities for this system of ponds were constructed during this year completing the work on this system.

CAMDEN PERCOLATION SYSTEM

Final construction, consisting of a levee separating these ponds from the creek channel and the reclaiming of about ten acres of surplus land, was completed during this year.

PENITENCIA PERCOLATION SYSTEM

During the year excavation was completed and all appurtenances installed in the new ponds so that they were ready for operation prior to reception of the first imported water on June 10, 1965.

The old ponds were cleaned out and revamped at the same time that work was being completed on the new ponds.

McGLINCEY PERCOLATION PONDS

An overflow structure connecting with the storm sewer on McGlincey Lane was constructed at the end of the string of ponds. This makes it possible to operate all of these ponds at maximum capacity at all times.

PAGE PERCOLATION SYSTEM

In order to increase the usefulness of this system during winter months the desilting area was doubled in size. This will make it possible to operate this system at a higher rate than has heretofore been possible.

At the end of the 1964-65 season the only incompleted ponds are the Sunnyoaks, Budd, Ford Road and Guadalupe ponds.

Present schedules call for completion of these latter ponds at the following dates:

Sunnyoaks	- 1966
Budd	- 1966
Ford Rd.	- 1969
Guadalupe	- 1972

In order to locate possible new percolation areas or to improve existing percolation facilities the District has continued the program of geophysical investigations that was begun last year.

GEOLOGICAL AND HYDROLOGICAL INVESTIGATIONS

The District continued its program of geological and hydrological investigations during the past year with excellent results.

Work in the Stevens Creek and Saratoga Creek areas indicated new sites for temporary spreading dams which were installed and tested during the year. Percolation rates on Stevens Creek were increased from 15 to 70 acre feet per day and on Saratoga Creek from 7 to 24 acre feet per day.

On the east side of the valley similar work on Penitencia located 9 new sites which when operated increased the percolation on this stream from 8 to 32 acre feet per day.

Prior to the County relocating San Tomas Creek in connection with the San Tomas Expressway project the District explored the new route and determined areas in which the County agreed to leave the bottom of the new channel unlined.

This investigative work is continuing along all stream channels and also in off-stream areas that might be available for additional percolation sites.

PUMPING DRAFT

Under the agreement between this District and the Flood Control District this District determines the amount of water diverted for irrigation purposes from streams, canals and pipelines and the Flood Control District determines the amount of water pumped from wells. In order to more accurately make these determinations both Districts purchased meters during the past year. The installation of meters on wells has not yet been completed so that the agricultural pumping draft is still subject to some uncertainty.

The amounts of water reported by the different classes of users for the three reporting periods since the pump tax was instituted are given in Table II.

TABLE II
Water Use In Acre Feet

Type of Use	Period		
	July-Dec. '64	Jan-June '65	July-Dec. '65
Municipal & Industrial	69,835	48,769	68,257
Agricultural (wells)	17,568	16,606	15,238
Agricultural (direct use)	878	2,275	2,353
Total Agricultural	18,446	18,881	17,591
Total Use	88,281	67,650	85,848

The total M & I use within this District for the 1964-65 fiscal year was 118,604 acre feet. This is 21,396 acre feet less than the estimated usage upon which the pump tax for that period was based.

The total agricultural use within the District during the 1964-65 fiscal year was 37,327 acre feet. This is 48,673 acre feet less than the estimate upon which the pump tax was based.

On the basis of past experience, about 55.5% of the total annual M & I use occurs in the first half of the fiscal year. If this holds true, the total M & I use for the 1965-66 fiscal year will be about 123,000 acre feet or approximately 7,000 acre feet less than estimated. This lower use is principally due to the fact that rainfall was above normal and summer temperatures were below normal. These two conditions combined to reduce domestic consumption below normal for the present population.

Over the past 30 years, records of agricultural power sales by the Pacific Gas & Electric Company indicate that 63% of the annual agricultural pumping draft takes place during the first half of the fiscal year and only 37% during the second half of the fiscal year.

Since the advent of the pump tax, however, there seems to have been a change in this distribution. It will be noted in Table II that the agricultural pumping draft from wells in the first half of the fiscal year was only 962 acre feet greater than in the second half of the fiscal year.

The total agricultural use from wells was 34,174 acre feet for the 1964-65 fiscal year. In the first half of the 1965-66 fiscal year the total agricultural use was 15,238 acre feet. If the relationship between the first and last halves of the fiscal year that prevailed last year is repeated this year, the total use from wells will only be about 29,600 acre feet.

On the basis of the limited data available on actual pumping draft, it is estimated that the agricultural draft from wells in the area north of Metcalf Road during the 1966-67 fiscal year will be 30,000 acre feet. In addition to this, agriculture will probably use about 4,000 acre feet from streams, canals and pipelines. It is estimated that municipal and industrial uses will amount to 123,000 acre feet.

INFORMATION REQUIRED BY WATER CODE

Tables III & IV present the information that is required to be included in this annual engineering report upon the ground water conditions of the District.

Explanation of Items in Table III:

Item 1. The average annual overdraft is composed of the loss of storage represented by the drop in the water table plus the water of compaction. Although this latter amount is not a replaceable quantity, it is considered as an overdraft item because it is an undesirable condition.

Item 2. This is the total loss of storage that has occurred since the average depth to water was last at sixty feet from the surface.

Item 3. During the current water year the average water level in that portion of the District north of Metcalf Road rose six feet which indicates a net recharge of 22,000 acre feet.

Item 4. It is assumed that there will be no change in the average depth to water during the ensuing water year so that the only overdraft will be the 14,000 acre feet of water of compaction.

Item 5. Due to the estimated rise in average water level during the current water year, the accumulated overdraft will be reduced by 36,000 acre feet.

Items 6 - 11. Self explanatory

Explanation of items in Table IV.

Item 1. In the area south of Metcalf Road the average water level is higher than it was ten years ago so that there has been an average replenishment of 1,000 acre feet per year.

Items 2-5. Due to the fact that the average water level in this area has been rising as a result of the District's operations, there is no overdraft.

Items 6-11. Self explanatory.

RECOMMENDATIONS

In conformity with Resolution No. 791 of the Board of Directors of the Santa Clara Valley Water Conservation District, it is recommended that the Board establish a zone in which to levy a ground water extraction charge.

This zone should encompass all of the District except the area more particularly described in Appendix A.

It is further recommended that the ground water extraction charge be based upon an estimated upmping draft of 30,000 acre feet of agricultural water, 123,000 acre feet of municipal and industrial water and 4,000 acre feet of surface delivered agricultural water.

TABLE III

AREA NORTH OF METCALF ROAD

1.	Average annual overdraft for the immediate past 10 water years	20,000 a.f./yr.
2.	Accumulated overdraft as of the last day of the preceding water year	522,000 a.f.
3.	Estimated annual overdraft for the current water year	-22,000 a.f.
4.	Estimated annual overdraft for the ensuing water year	14,000 a.f.
5.	Estimated accumulated overdraft as of the last day of the current water year	486,000 a.f.
6.	Estimated amount of agricultural water to be withdrawn from the ground water supplies of the District for the ensuing water year	30,000 a.f.
7.	Estimated amount of water other than agricultural water to be withdrawn from the ground water supplies of the District for the ensuing water year	123,000 a.f.
8.	Estimated amount of water needed for surface distribution for the ensuing water year	4,000 a.f.
9.	Amount of water that is necessary for the replenishment of the ground water supplies of the District for the ensuing water year	*153,000 a.f.
10.	Amount of water the District is obligated to purchase during the ensuing water year	None
11.	Estimated total production of water from the ground water supplies of the District for the preceding water year	152,778 a.f.

---

* This is the minimum amount required to provide for the estimated pumping draft during the ensuing water year.

TABLE IV

AREA SOUTH OF METCALF ROAD

1.	Average annual overdraft for the immediate past 10 water years	-1,000 a.f./yr.
2.	Accumulated overdraft as of the last day of the preceding water year	None
3.	Estimated annual overdraft for the current water year	None
4.	Estimated annual overdraft for the ensuing water year	None
5.	Estimated accumulated overdraft as of the last day of the current water year	None
6.	Estimated amount of agricultural water to be withdrawn from the ground water supplies of the District for the ensuing water year	16,000 a.f.
7.	Estimated amount of water other than agricultural water to be withdrawn from the ground water supplies of the District for the ensuing water year	1,800 a.f.
8.	Estimated amount of water needed for surface distribution for the ensuing water year	1,500 a.f.
9.	Amount of water that is necessary for the replenishment of the ground water supplies of the District for the ensuing water year	*17,800 a.f.
10.	Amount of water the District is obligated to purchase during the ensuing water year	None
11.	Estimated total production of water from the ground water supplies of the District for the preceding water year	16,000 a.f.

---

* This is the minimum amount required to provide for the estimated pumping draft during the ensuing water year.

APPENDIX A

PORTION OF SANTA CLARA VALLEY WATER CONSERVATION DISTRICT SUBJECT TO AD VALOREM TAX

Situate in the County of Santa Clara, State of California,

Beginning at a point of intersection of the centerline of the Monterey Road (State Highway) with the northerly boundary line of the Rancho Laguna Seca, running thence northeasterly along said Rancho line to the northwesterly prolongation of the dividing line between the lands, now or formerly, of Ramelli Company and Antonetta Orlando; thence southeasterly along said dividing line to the dividing line between the lands, now or formerly, of Willis S. Clayton, Jr. and said Ramelli, thence easterly and southeasterly along the northeasterly line of the land of said Willis S. Clayton, Jr. and its southeasterly prolongation to the northwesterly line of the land of O'Connell Brothers; thence southwesterly along the northwesterly line of the land of O'Connell Brothers to the northeasterly corner of the Daniel Rota's segregation, as same is recorded in Book E. of Misc., Pages 514 of the Official Records of Santa Clara County, California; thence southeasterly along the northeasterly line of said segregation to the southeasterly corner thereof, said corner being in northwesterly line of the land now or formerly of James Stevens et al; thence northeasterly, southeasterly, northeasterly and southeasterly along said line of said Stevens land, also being the dividing line between said Stevens land and O'Connell Brothers to the northeasterly corner of the land of J. A. and Elsie M. Daly; thence continuing southerly along the southwesterly line of the land of O'Connell Brothers, also being the easterly line of the lands of J. A. and Elsie Daly, Pacific Coast Aggregates, Inc., S.C.V.W. District to the northwesterly line of the Ogier subdivision, as same is recorded in Book O of Maps, Page 61 of the Official Records of Santa Clara County, California; thence northeasterly along the northwesterly line of said Ogier Subdivision to the southwesterly line of the right of way conveyed by Margaret and I. Battaglia to Santa Clara Valley Water Conservation District as recorded in Volume 806, Page 484 of said Official Records; thence southeasterly along said right of way line and the southwesterly line of the right of way conveyed by Frank J. and Grace M. Polak and John P. Fitzgerald et al as recorded in Volume 803, Page 575 and 807, Page 507, respectively, of said Official Records to the dividing line between the lands now or formerly E. F. and Eleanor M. Driscoll and Cedric A. and Reva I. Fegtly; thence northeasterly along said dividing line between the lands of said Driscoll and Fegtly to the northeasterly line of the lands of said Fegtly; thence southeasterly along the northeasterly line of said Fegtly and the lands, now or formerly, of Germano and Giseppina Pruzzo, Charles and Leo Prusso, the northeasterly line of Malaguera Tract, as recorded in Book F2 of Maps Page 11, the northeasterly line of J. M. McElhany's Subdivision as recorded in Book M of Maps Page 60, Peter and Laura Orlando, Sebastian G. and Luigia Borello, Harold E. and Helene D. Thomas to the northeast corner of said Thomas; thence southerly along easterly line of the land of said Thomas to the most northerly line, and its westerly prolongation of that certain 0.46 acre parcel of land conveyed by the Santa Clara Valley Water Conservation District to Peter Ruff, Joy Ruff and James Ruff by deed recorded March 27, 1964 in Book 6441 of Official Records of Santa Clara County, State of California at page 26. Thence along the said northerly line N 64°27' E 228.38 feet to the northeast corner of said 0.46 acre parcel of land. Thence along the easterly line of said 0.46 acre parcel S 11°16' E 100.00 feet to the south east corner of said 0.46 acre parcel. Thence along the southerly line of the 0.46 acre parcel S 64°27' W 206.38 feet to a point in the center line of Coyote Road which bears N 11°16' W 208.72 feet from the northwesterly corner of that certain 30.34 acre tract as shown upon that certain map entitled, "Record of Survey of Lots 128 and 129, Morgan Hill Ranch Map No. 1, which map was filed for record in the office of the Recorder of the County of Santa Clara, State of California, on December 5, 1945 in Book 9 of Maps, at page 9. Thence along the center line of Coyote Road S 11°16' E. 208.72 feet to the northwest corner of said 30.34 acre tract; thence along the northerly line of said 30.34 acre tract N 64° 27' E. 215.35 feet; thence leaving said northerly line S 9° 49' E. 127.52 feet; thence S 27°13' E. 182.62 feet; thence N 78°43' E. 110.00 feet; thence S 25°25' E., 475 feet to a point on the southerly line of said 30.34 acre tract; thence along the said southerly line N 64°35' E. 1272.02 feet to the easterly line of said Morgan Hill Ranch Map No. 1 at the common corner for lots 14 and 128, as shown on that certain map entitled Morgan Hill Ranch Map No. 1 as recorded in Book "F" of maps at page 11, records of Santa Clara County, State of California. Thence along the said easterly line, being also the westerly line of Pueblo Tract No. 5 of San Jose City Lands, S 53°04' E, along the easterly lines of lots 14, 15, 119 and 120 to northwesterly line of lot 121. The said northwesterly line being the northeasterly prolongation of the center line of Diana Avenue; thence southwesterly along the said northwesterly line of lot 121 and the center line of Diana Avenue to the northeasterly line of the land conveyed to Guisseppe Bonaccorso et al, File 327512 of the Official Records of Santa Clara County, State of California; thence southeasterly along the northeasterly line of the land of said Bonaccorso et al and its southeasterly prolongation to the northwesterly line of Morgan Hill Ranch No. 7; thence northeasterly along the northwesterly line of said Morgan Hill Ranch No. 7 to the most northerly corner thereof; thence southeasterly along the northeasterly line of said Morgan Hill Ranch No. 7 to the northwesterly line of Lot No. 125 of said Morgan Hill Ranch No. 1; thence northeasterly along the northwesterly line of said Lot No. 125 to the northeasterly line of the land conveyed to John R. Hubbell and Dehlia M. Hubbell, File No. 403975 of said Official Records; thence southeasterly along the northeasterly line of the lands of said Hubbell to the northwesterly line of Lot No. 126 of said Morgan Hill Ranch No. 1; thence southwesterly along the northwesterly line of said Lot No. 126 to the southeasterly line of said Morgan Hill Ranch No. 1; being in the northwesterly line of Catherine Dunne Ranch No. 7; thence northeasterly along the northwesterly line of said Dunne Ranch No. 7 to the dividing line between the lands, now or formerly, of A. M. Jackson and J. F. and Esther M. Kallan; thence southeasterly along said dividing line and its southeasterly prolongation to the northwesterly line of Lot No. 192 of said Dunne Ranch No. 7; thence northeasterly along the northwesterly line of said Lot No. 192 to the northeasterly line thereof, also being in the easterly line of said Dunne Ranch No. 7; thence southeasterly, northeasterly and southeasterly along the easterly boundary line of said Dunne Ranch No. 7 to the centerline of Maple Avenue; also being the northerly line of San Martin Ranch No. 2; thence easterly along the northerly line of said San Martin Ranch No. 2 to the easterly line of Lot No. 234 of said San Martin Ranch No. 2; thence southerly along the easterly line of Lots 234, 235 and 236 to the southerly line of said Lot 236 of said San Martin Ranch No. 2, being in the centerline of Middle Avenue; thence westerly along the centerline of Middle Avenue to the centerline of Vine or Murphy Avenue; thence northerly along the centerline of Vine or Murphy Avenue to the centerline of Tennant Avenue; thence westerly along the centerline of Tennant Avenue to the centerline of Monterey Road, State Highway; thence southeasterly along the centerline of Monterey Road to the centerline of Watsonville Road; thence southwesterly along the centerline of Watsonville Road to the centerline of Sunnyside Avenue; thence northwesterly along the centerline of Sunnyside Avenue to the centerline of Edmundson Avenue; thence northeasterly along the centerline of Edmundson Avenue to the centerline of Sunset Avenue; thence northwesterly along the centerline of Sunset Avenue and the dividing line between Lots 19 and 24 of said Catherine Dunne Ranch No. 3 to the centerline of Spring Avenue, being the city limits line of the city of Morgan Hill; thence westerly, northerly and easterly along the southerly, westerly and northerly boundary line of the City of Morgan Hill to the easterly line of the right of way of the Southern Pacific Company; thence northwesterly along the easterly line of said right of way to the northeasterly prolongation of the southeasterly line of the land, now or formerly of Jere W. and Lillie T. Sheldon, said line being southeasterly line of the La Laguna Seca Rancho; thence southwesterly along said southeasterly line of said Rancho to the dividing line between the lands, now or formerly, of Sara F. Tilton and said Sheldon; thence northwesterly along said dividing line and its northwesterly prolongation to the centerline of Church Avenue as shown upon Dougherty and Randol Tract; thence southwesterly along the centerline of Church Avenue to the centerline of Orchard Avenue; thence northwesterly along the centerline of Orchard Avenue to the centerline of Miramonte Avenue; thence southwesterly along the centerline of Miramonte Avenue to the southwesterly line of said Dougherty Randol Tract; thence northwesterly along said southwesterly line of said Dougherty and Randol Tract to the most westerly corner thereof, being in the southeasterly line of the Murphy-Colombet Subdivision No. 3; thence southwesterly along the southeasterly line of said Murphy-Colombet Subdivision No. 3 to the southwesterly line thereof; thence northwesterly along the southwesterly line of Murphy-Colombet Subdivision No. 3 and No. 2 to the most westerly corner of said Murphy-Colombet Subdivision No. 2; thence northeasterly along the northwesterly line of said Murphy-Colombet Subdivision No. 2 to the northeasterly boundary of the Reclamation District No. 1663 as recorded in Volume 1 of Reclamation Districts Page 1 to 18 inclusive; thence in a general northwesterly direction to the dividing line between the lands, now or formerly, of M.W. and Jennie A. Thorpe and Oliver and Henry Bonetti, File No. 363611; thence northwesterly along said dividing line between the lands of said Thorpe and Bonetti to the northerly boundary line of the Rancho Laguna Seca; thence northeasterly along the northerly boundary of said Rancho to the point of beginning.

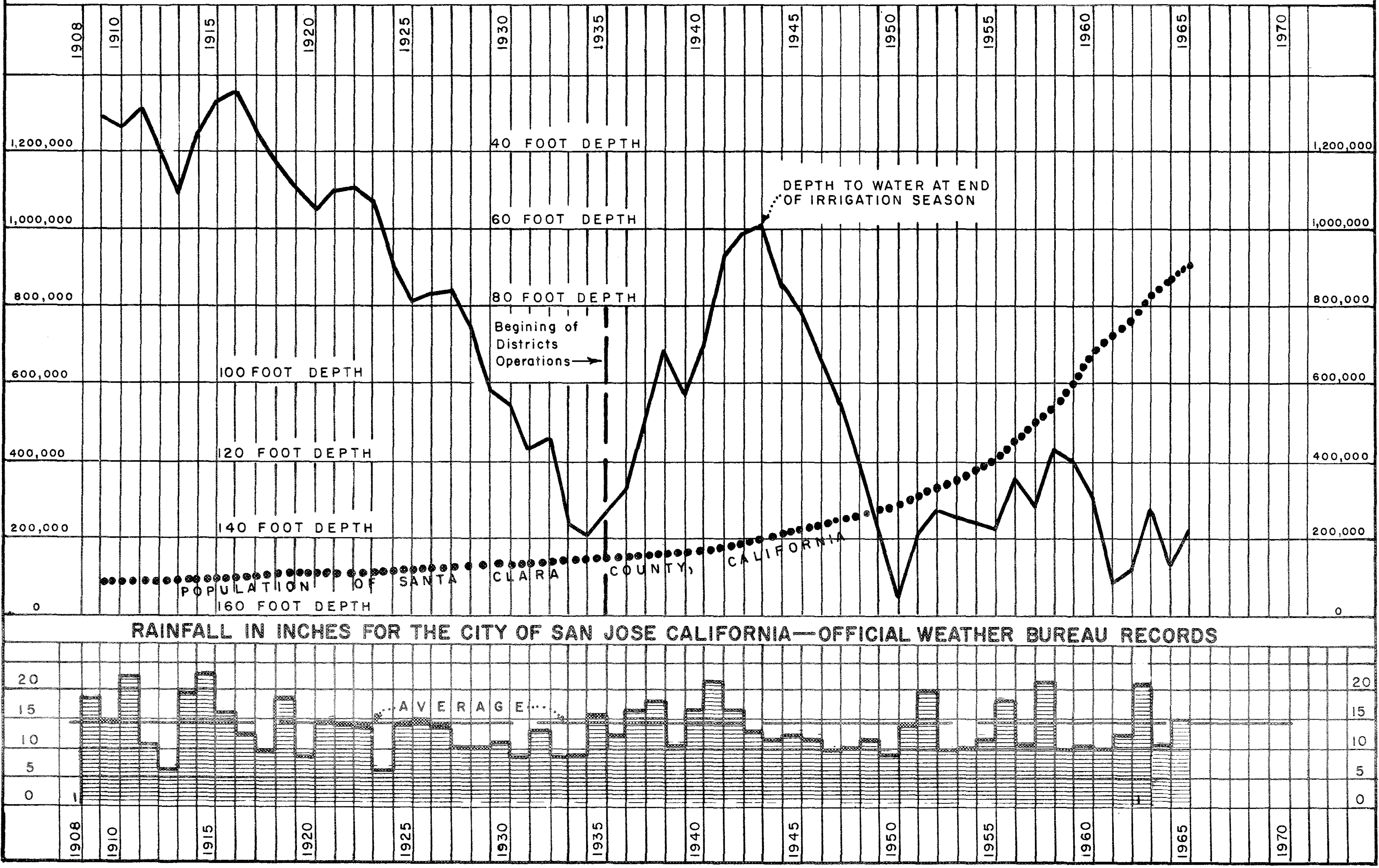
Also including the following described portion of land:

BEGINNING at a 4" x 4" post marked S. F. No. 17 as referred to in the Patent issued by the United States of America to Charles M. Weber, recorded October 5, 1872 in Book B of Patents, page 81, said post also being at an angle corner in the general Northerly line of the Rancho Canada De San Felipe Y Las Animas; thence from said point of beginning south 00° 04' 40" East along an Easterly line of said Rancho, for a distance of 3968.95 feet to a post S. F. No. 16 set at an angle corner therein; thence North 89° 50' 30" East along a northerly line of said Rancho, for a distance of 5312.24 feet to a 2 inch iron pipe S. F. No. 15, set at an angle corner therein; thence South 00°01' East along an Easterly line of said Rancho, for a distance of 2650.60 feet to an iron pipe S. F. No. 14, set at an angle corner therein; thence leaving said Rancho line and running due West 4562.32 feet to an iron pipe; thence Southwestery along a line lying Northwesterly of the general Northwesterly line of an existing road, for the following courses and distances; South 26° 43' West 130.08 feet to an iron pipe; thence South 26° 43' West 347.55 feet to an iron pipe; thence South 14° 35' East 307.88 feet to an iron pipe; thence South 35° 18' West 530.56 feet to an iron pipe; thence south 51° 56' West 307.57 feet to an iron pipe; thence south 61° 36' West 191.43 feet to an iron pipe; thence South 71° 37' West 144.25 feet to an iron pipe; thence South 82° 37' west 214.17 feet to an iron pipe; thence South 60° 17' West

332.95 feet to an iron pipe; thence South 44° 18' West 216.80 feet to an iron pipe; thence South 49° 12' West 161.83 feet to an iron pipe; thence South 08° 42' West 242.95 feet to an iron pipe; thence North 72° 17' West 146.90 feet to an iron pipe; thence South 71° 26' West 346.54 feet to an iron pipe; thence South 17° 52' West 574.93 feet to an iron pipe; thence South 70° 58' West 146.46 feet to an iron pipe; thence South 11° 05' East 171.45 feet to an iron pipe; thence South 39° 32' West 179.20 feet to an iron pipe; thence South 06° 56' East 167.35 feet to an iron pipe; thence South 04° 18' East 107.47 feet to an iron pipe; thence South 14° 14' East 96.56 feet to an iron pipe; thence South 09° 46' West 149.48 feet to an iron pipe and South 20° 36' East 169.59 feet to an iron pipe; thence due west 5502.88 feet to an iron pipe set at the point of intersection thereof with the Southeasterly prolongation of an existing fence line; thence North 42° 49' West along said last mentioned prolongation and fence line, for a distance of 10,662.47 feet to an iron pipe; thence due north 2601.04 feet to an iron pipe set in the Northerly line of said Rancho Canada De San Felipe Y Las Animas; thence due East along said Rancho line, for a distance of 14,575.31 feet to the point of beginning and being a portion of that certain 8787.80 acre tract of land as described in the Patent issued by the United States of America to Charles M. Weber, recorded October 5, 1872 in Book B of Patents, page 81, in the Rancho Canada De San Felipe Y Las Animas.

SANTA CLARA VALLEY WATER CONSERVATION DISTRICT

RAINFALL, AVERAGE DEPTH TO WATER AT END OF IRRIGATION SEASON, POPULATION



REVISED OCTOBER 1965

FLUCTUATION OF AVERAGE WATER LEVEL

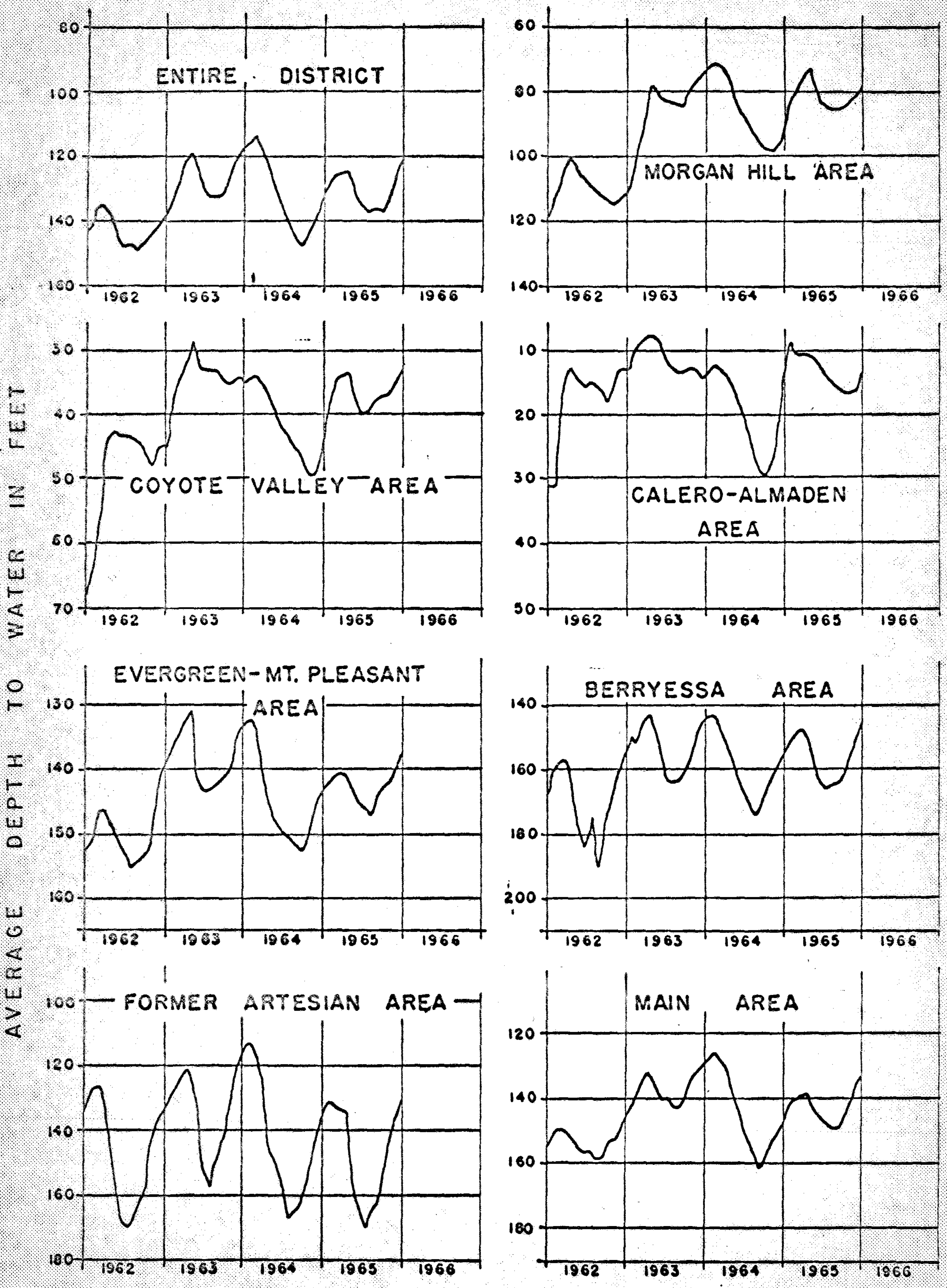
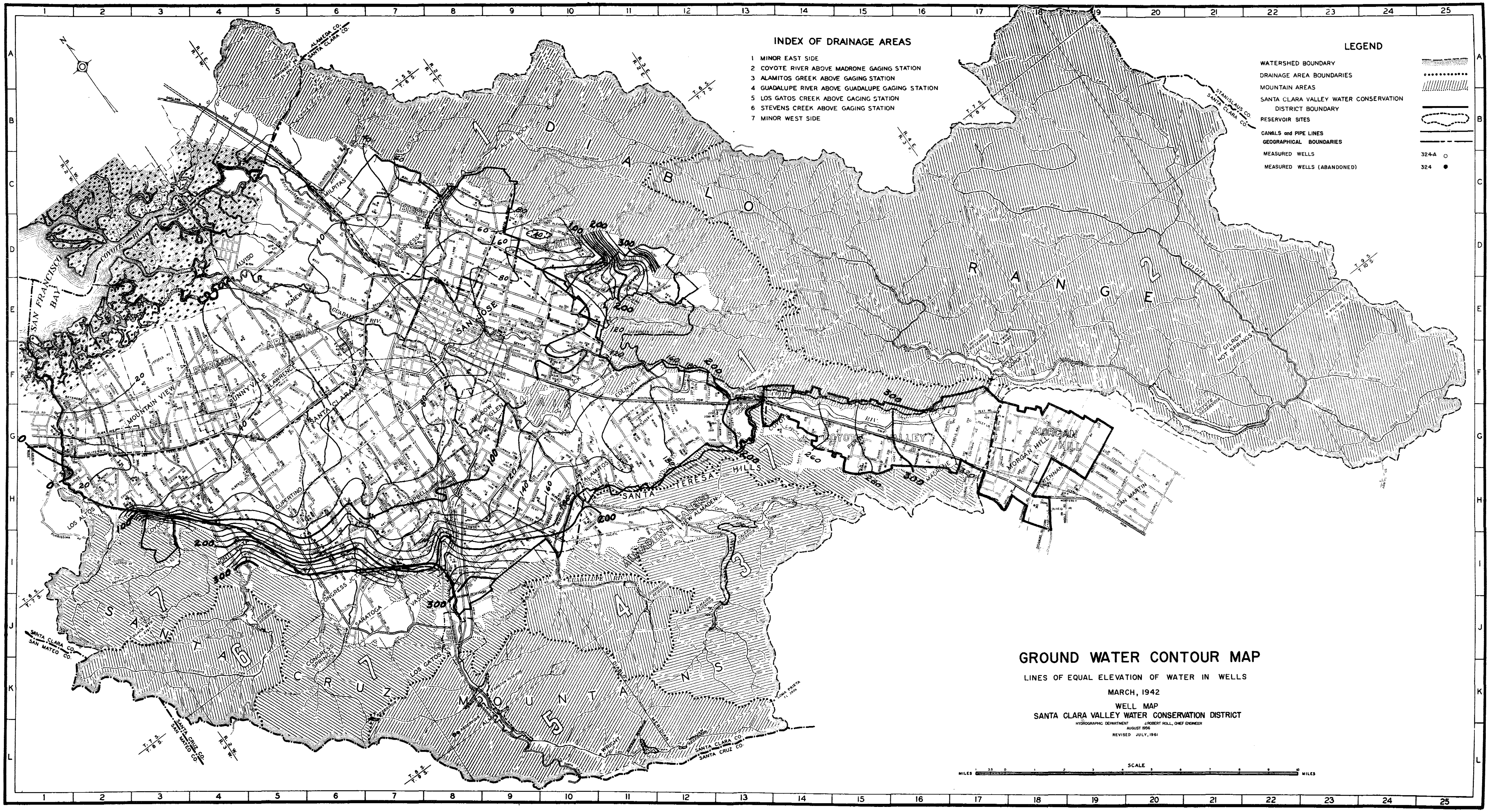


PLATE II

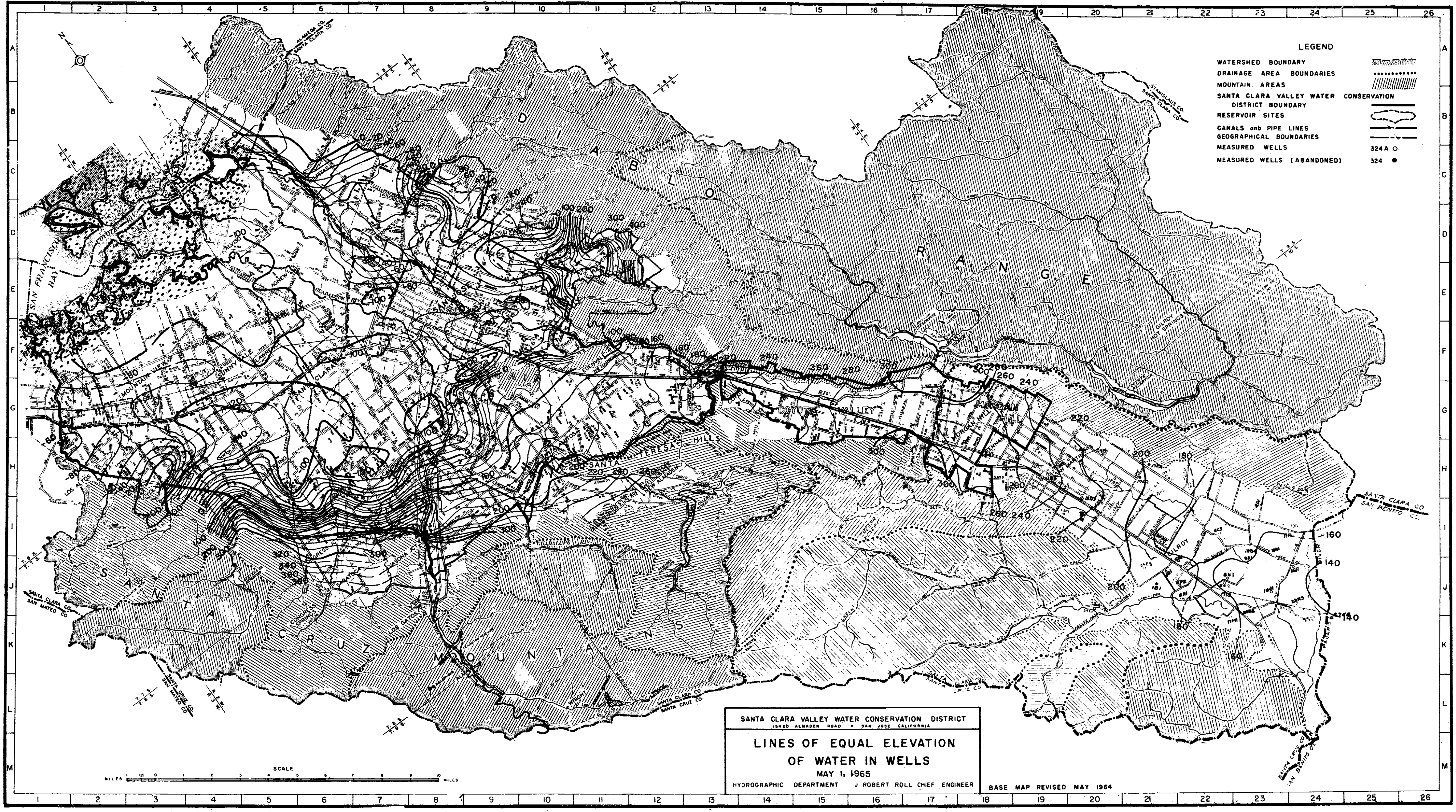


GROUND WATER CONTOUR MAP

LINES OF EQUAL ELEVATION OF WATER IN WELLS

MARCH, 1942

WELL MAP
SANTA CLARA VALLEY WATER CONSERVATION DISTRICT
HYDROGRAPHIC DEPARTMENT J. ROBERT ROLL, CHIEF ENGINEER
AUGUST 1956
REVISED JULY, 1961



SANTA CLARA VALLEY WATER CONSERVATION DISTRICT

15420 ALMADEN ROAD • SAN JOSE CALIFORNIA

LINES OF EQUAL ELEVATION OF WATER IN WELLS

MAY 1, 1965

HYDROGRAPHIC DEPARTMENT J ROBERT ROLL CHIEF ENGINEER

BASE MAP REVISED MAY 1964

PLATE 4